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ORIGINAL ARTICLES.

FATAL OBSTRUCTION OF THE ILEO-CÆCAL VALVE BY A GALL-STONE.

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MY patient was a gentleman well advanced in the seventies, showing unmistakably the feebleness of old age, but still able to enjoy his daily walk and give some attention to business. I saw him first upon the morning of the 20th of July. The preceding evening he had taken some purgative pills to relieve a condition of constipation which was more or less habitual with him. I found that the bowels had acted slightly, but that vomiting had occurred some hours before my arrival, and still continued at intervals. The patient had an anxious expression of countenance, the conjunctivæ were slightly jaundiced, features sunken and pale, hands and feet cold, axillary temperature normal, and pulse weak and compressible. He complained of some abdominal pain, not great however. Inspection showed the abdomen of normal contour, not painful upon pressure, no meteorism, neither could any tumor be detected. There was, however, an apparent but very moderate dulness in the ileo-cæcal region. The vomiting was most distressing, allowing the patient but short intervals of rest, and immediately caused by any movement as sitting up in bed, or the ingestion of even small quantities of nourishment. The matter vomited at this time contained particles of food and large quantities of bile, and was ejected with considerable retching.

But little change occurred in the symptoms during the following six days, excepting that the patient grew weaker and more exhausted as the disease approached its fatal termination. The abdomen, daily examined in the hope that new light might be thrown upon the case, remained very much as above noted, showing no symptoms of general or local peritonitis. It was but to a very trifling degree painful upon pressure, and was distended by a very moderate amount of tympanites. The dulness in the right hypochondrium did not increase, and no tumor was felt. The vomiting, although upon several occasions controlled for three or four hours, or longer, invariably returned, becoming more and more alarming in character, simple rejection of the ingesta and bile giving place to stercoraceous vomiting, accompanied by frequent eructations of fetid gases. Attacks of hiccough added still more to the patient's discomfort.

After the small evacuation on the 20th, the bowels remained obstinately constipated; the patient was however frequently annoyed by a feeling of tenesmus, and an idea that the bowels were about to be moved. The secretion of urine at first presented nothing worthy of remark, but became gradually more scanty, and during the last eighteen hours of life was completely suppressed. The patient gradually sank, and on the 26th of July, six days after the initial attack, died, exhausted by the constant vomiting and his inability to take nourishment.

The family gave their consent to an autopsy, which I immediately made, and found the cause of the obstruction to be a large stony concretion, firmly wedged into and completely occluding the ileo-cæcal valve. No other lesion was observed excepting injection and inflammation of the intestine immediately surrounding the stone. The stone was an inch and three-quarters in length, and one inch or over in diameter. Oval in form, dark brown in color, with a hard smooth surface, and a fatty greasy feeling. Having placed it in the hands of a chemist for analysis, it was reported to consist of cholesterine, inorganic and coloring matters, the cholesterine vastly preponderating, forming some eighty per cent. of the whole.

How to explain the presence of so large a concretion in the intestine is a matter of some interest. If this had proved to be an intestinal stone, we would be put to no trouble on that score. Enteroliths, however, are usually found in the large intestine, and consist in great measure of lime and magnesia, or of hardened feces and mucus, having perhaps some foreign body for a nucleus. The chemical analysis, however, of this body, shows it to be composed entirely of cholesterine, therefore a true gall-stone.

Being a gall-stone, could it, when of dimensions permitting its escape from the gall-bladder, have passed into the intestine, and there lying in a sack or diverticulum, grown to its present size. The very different conditions under which the bile appears in the intestines, render this supposition highly improbable. Whatever other changes in the condition of the bile contribute to the formation of these calculi, certainly rest and stasis are among the most important factors—conditions which would not be found in the intestine, where the admixture of the bile with the products of digestion and the peristaltic movements of the intestine, would be very unfavorable conditions for the precipitation and crystallization of biliary constituents. Is it possible, then, that a gall-stone of such unusual size, could have traversed the cystic and common ducts? Can we suppose that a concretion which caused fatal intestinal obstruction ever passed through such narrow canals? Where do we find forces powerful enough to accomplish such a result?

The force which propels gall-stones through the excreting ducts is by no means thoroughly understood by observers.

The force exerted by the onflow of the dammed-up bile, by the contractions of the gall-bladder and abdominal muscles, appear hardly or but just adequate to the expulsion of small stones, certainly in-

sufficient for the extrusion of a stone one and three-quarters in length by one in diameter. Another reason for supposing that the intestine was reached by other than the natural route was the fact that most careful and painstaking inquiry failed to elicit any history of hepatic colic; and we may rest assured that the intense pain and other marked symptoms incident to the passage of a gall-stone through the ducts would have impressed themselves indelibly upon the sufferer's memory. This remarkable fact is especially mentioned by Murchison and others, who have reported a number of cases of large gall-stones causing in some cases death, and in others finally passed per anum after more or less alarming symptoms; the patient, in fact, being unaware of the occurrence of anything unusual until the stone, reaching the intestine, caused symptoms of obstruction.

I think, then, that the facts of this case warrant the conclusion that the gall-stone under consideration escaped from the gall-bladder by means of a fistulous tract connecting it with the duodenum. There is nothing improbable in this supposition. A large foreign body lying in the gall-bladder, and closely approximated to its walls, must in time cause inflammation, and finally ulceration, of its tissue. The local peritonitis accompanying these changes would, by the exudation of lymph, cause the agglutination and adhesion of the opposing surfaces of the gall-bladder and duodenum; and thus, by one of the conservative efforts of nature, give the patient at least a chance for his life.

Such a local peritonitis may occur without giving rise to any well-defined symptom, as the history of this case and of others reported makes sufficiently obvious.

Autopsical examinations (especially those made by Murchison) have in many instances shown the presence of these fistulas, and lead us to infer that it is not a very unusual occurrence.

The treatment of this case presents nothing of special interest. One of the most prominent indications for treatment was to control the vomiting, and to attain this desired result a variety of medicines was employed with, it must be confessed, very indifferent success, with the single exception of morphia. Morphia, however, proved useful; and, under its influence the patient enjoyed tolerably prolonged intervals of rest from the harassing attacks of vomiting, which permitted him to sleep, and, to some extent, to recover from his exhaustion. The morphia treatment was the more willingly persevered in as it met the indications for intestinal obstruction, and was given in such doses as appeared necessary to control or moderate peristaltic action, and to lessen pain and colic. Enemata were used early in the attack, not so much in the hope that they would prove of service in overcoming obstruction (for the occlusion was supposed to lie in the small intestine) as for the purpose of emptying the lower bowel, and thus in some measure rendering the patient's condition more tolerable. The injections, however, merely brought away a small amount of fecal matter from the rectum and sigmoid flexure.

Externally hot applications were made over the abdomen.

The administration of nourishment was a matter of great difficulty. The smallest amounts of milk and lime-water, or of beef-tea, were immediately rejected by the stomach, and, finally, the attempt had to be abandoned, and life maintained by nutritious rectal enemata. These were fortunately retained, and in great measure absorbed. It was not until the last day or two of life that the rectum became too irritable to permit of this method of administering nourishment.

In conclusion, it may be added that the exhaustion and collapse rendered stimulants necessary.

URIC ACID:

(1) ITS MEDICAL RELATIONS:
(2) A RELIABLE METHOD OF QUANTITATIVE ESTIMATION.

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THE quantity of uric acid secreted daily varies from 7½ to 15 grains under normal conditions, or, what seems to be of more practical moment, the quantity of uric acid secreted daily is, according to the estimations of H. Ranke, in the proportion of 1 : 41 to 1 : 61 of urea.

The quantity of uric acid is lessened at the onset of acute gout, followed later by a rise. It is also diminished by chronic gout, osteomalacia, and the different forms of Bright's disease. In diabetes mellitus there is a diminution of the uric acid with an increase of the urea.

There is in fever a marked increase according to all observers, and especially in croupous pneumonia, this being both absolute and relatively to the urea.

Bartels found in a case of poisoning by carbonic oxide (CO), the proportion of uric acid to urea to be 1 : 30.

Senator thought he had proved by experiments on animals that dyspnœa caused an increased amount of uric acid secretion, and Bartels has shown that the same holds in the case of men. But it has been recently clearly shown by several quantitative calculations by different observers, that in leukæmia the normal proportion of uric acid to urea found in the urine is greatly disturbed. That there is at all events a great increase in the quantity of uric acid, so that the proportion, instead of being as stated above, may be 1 : 20, or even 1 : 16.

The explanation offered in this case as well as in the case of the increase in dyspnœa (whether owing to disease or artificially induced), is diminished oxidation in the body generally. The "respiratory" power of the blood must plainly be lessened in leukæmia. This taken in connection with the well-known fact that in the laboratory uric acid can be oxidized to urea, affording a hypothetical basis for the assumption that it actually is so oxidized in the body, and that interference with the normal supply of oxygen on the one hand, or with the process of oxidation on the other, may keep more than the usual quantity of uric acid back from its change to urea; all this lends great plausibility to such an hypothesis.

I have satisfied myself of the truth of the above-

stated fact as to an increase of the uric acid and disturbance of its proportion to urea in leukæmia, by an estimation according to Salkowski's method presently to be described.

The quantity of urea for twenty-four hours, was by Liebig's method found to be 19.260 grains. That of uric acid, 1.0423. The ration, 1 : 28.

Manifestly before such calculations can be of great value the method of estimation must be reliable.

The method that was for a long time followed, and is still largely used, is that of Heintz, which is as follows: To 200 cc. of urine, 10 cc. of hydrochloric acid are to be added, allowed to stand in a cool place for forty-eight hours, then collected by filtration, etc., on a weighed filter, washed, the wash water collected, measured, and a correction by way of an addition made to the amount of urea actually found.

There was however, supposing all the uric acid to be precipitated, a variable error arising from the very fluctuating quantity of pigment adhering to the crystals. More than a year ago I undertook to ascertain definitely by actual comparative estimations how reliable this method really was, and with the following results: Having first ascertained that Salkowski's silver method was absolutely accurate, calculations were made by this method and compared with the results obtained by Heintz's method. The figures here given in a single example, using the same urine for each method, will make the matter clear.

I. Heintz's method:

	Grains.
Weight of watch-glasses, clip, filter with uric acid	15.223
Weight of watch-glasses, clip only .	15.208
Weight of uric acid .	00.015

II. Salkowski's method:

	Grains.
Weight of watch-glasses, clip, filter with uric acid	22.8235
Weight of watch-glasses, clip only .	22.7735
Weight of uric acid .	00.0600

The corrective addition for Heintz's method would not equal that for Salkowski's, so that it is clear that in this case the amount found by Heintz's method is only one-fourth what it ought to be, notwithstanding that after the addition of hydrochloric acid the urine was allowed to stand seventy-two instead of forty-eight hours. After the application of Salkowski's method no uric acid can be detected in the filtrates.

To insure success with it, the minutest details must receive attention. I shall, therefore, give Salkowski's own account of it in full.

250 cc. urine are to be treated with 50 cc. ammoniacal magnesian mixture (made by mixing one part crystallized magnesium sulphate, two parts ammonium chloride, four parts ammonia of sp. gr. 0.924, and eight parts water), and at once filtered. Take of this 240 cc., representing 200 cc. urine, and treat with a solution of silver nitrate of about three per cent. strength. This produces a flaky gelatinous precipitate, easily distinguishable from silver chloride. A little ammonia may be added to insure the solution of all the silver chloride. Upon standing, this precipitate soon settles to the bottom, leaving the supernatant fluid clear.

A little of the latter must be drawn off with a pipette into a test tube, and tested for silver by the addition of nitric acid to acid reaction. If a turbidity is visible, enough (slight excess) of silver nitrate has been added. If not, the fluid withdrawn must again be made alkaline with ammonia, and poured back and more silver nitrate added and tested anew. The whole is then filtered at once (to avoid decomposition), through a folded filter made of good rapidly filtering paper, and of about 12 cm. diameter. The precipitate is to be brought upon the filter with a trimmed feather and washed several times with water.

It must be washed until evidence of the presence of silver can no longer be obtained by treatment with nitric acid as above, nor of chlorides by the addition of silver nitrate. One hour on the average suffices for this part of the work. The filter with the precipitate (or the precipitate washed off by a wash-bottle), to be brought into a wide-mouthed flask, about 200 cc. of water added, shaken well, and submitted to a stream of sulphuretted hydrogen not too weak, with constant shaking. The contents of the flask are next heated to the beginning of boiling and a few drops of hydrochloric acid added until the reaction is decidedly acid. Filter free from silver sulphide (and paper), using a folded filter to expedite the process, then wash several times with hot water. The filtrate should be clear and colorless. Evaporate the filtrate as rapidly as possible in a porcelain dish over a free flame to a few centimetres. Add a few drops of hydrochloric acid and after twenty-four hours standing in the cold, the precipitate that has separated is collected on a weighed filter, washed first with water, then with alcohol, and finally with absolute alcohol and ether. The wash water is to be collected, measured, and for every 10 cc. of it 0.48 milligramme is to be added to the weight of uric acid found.

Very concentrated urine (fever) is to be diluted to double its bulk.

The above account of this method is a free translation of that given in *Die Lehre vom Harn, von Dr. Salkowski und Dr. Wilhelm Leube*, in which elaborate work the whole subject of uric acid is fully discussed.

As this method is tedious and laborious, I have tried to find another less open to these objections, and first of all by different degrees of concentration of the urine before treatment with hydrochloric acid. By this means much more uric acid can be obtained, but it is liable to be, and in fact generally is, mixed with much pigment, the separation of which is a matter of great difficulty. However, if Heintz's method is to be used, some concentration and allowing the urine to *stand for at least a week* will give results much more nearly correct. But there can no longer be any doubt that this old method of Heintz is very incorrect. I succeeded, indeed, in finding a new method, but, upon the whole; not less tedious than that of Salkowski, so that I feel confident in

stating that, for the determination of uric acid, Salkowski's method is the best known and is absolutely reliable.

A CASE OF LATE CUTANEOUS SYPHILIS (ACNE-LIKE SYPHILODERM OF THE NOSE), ILLUSTRATING THE OCCASIONAL NECESSITY OF LARGE DOSES OF POTASSIUM IODIDE.

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THE patient, an intelligent male German, whose case furnishes the material for this paper, applied for treatment at the Northern Dispensary in August of 1883. On the right side of the nose, near the junction of the ala with the cheek, were three or four papular elevations, the apices of which were slightly depressed with a central point of suppuration. Each lesion was about the size of a small split-pea. In appearance they resembled abraded acne papulo-pustules. There was some infiltration, with more or less redness. On other parts of the nose, and in the immediate neighborhood of the same, were several small pea-sized, shallow scars, the remains, evidently, of recent lesions. At a point near the base of the nose was an acne-like papulo-pustule. The eruption had made its appearance three months previously. The forehead presented scars similar to those about the nose, except that they were much paler and less distinct, and in other ways showed that they were remains of an eruption of some years past. No other symptoms presented. Questioning elicited that the patient, fifteen years ago, had had a venereal disease, which he had always considered simply a gonorrhœa. So far as the patient remembered, there had been no symptoms of cutaneous disturbance until eight years later, when the eruption on the forehead made its appearance. At this time, also, there appeared a suppurating, gummatous swelling upon the left forearm, the scar of which is still plainly visible. After a few months' treatment the eruption and the gummatous ulceration disappeared, leaving the cicatrices already mentioned. Since then, up to the time of the present eruption, patient had enjoyed his usual good health, and had observed no other symptoms, either objective or subjective.

Patient is a married man, and the father of four children, three of whom died in the first two months of life; the fourth is still living, and is perfectly healthy. The wife, so far as he is cognizant, has never had any cutaneous disease, or shown any symptom which could be looked upon as suspicious.

So much for the history and condition of patient when admitted for treatment.

The diagnosis of syphilis was made, and patient placed upon potassium iodide and the red iodide of mercury, five grains of the former and one-twenty-fourth of the latter three times daily. An ointment of thirty grains of white precipitate to the ounce of lard was ordered for local application. In the next two weeks a few new papulo-pustules appeared on other parts of the nose, somewhat inflammatory, and with considerable surrounding hyperæmia. The other lesions were slowly retrograding. The dose of the potassium iodide was increased to ten grains, and that of the mercury to one-sixteenth. Two weeks more passed, and the eruption still remained uninfluenced; new lesions slowly appearing, and the old ones as slowly disappearing. A shallow depression and scar marked the site of each disappearing lesion. When two or three lesions existed close together, the intervening skin was slightly reddened and infiltrated. With the eruption there was more or less papillary and connective tissue hypertrophy. Indeed, the resemblance to acne rosacea was striking: the papulo-pustules, to a certain extent, simulating the acne lesions, and the superadded redness and hypertrophy, together with the presence of a few small dilated capillaries, completing the picture. The iodide was now increased to twenty-grain doses, with an increase also in the mercury biniodide. No change taking place in two weeks, the iodide was still further increased to thirty grains three times daily. Fourteen days under this dose showed no appreciable improvement.

The patient had now been under treatment two months, and the character and course of the disease remained unchanged; the older lesions disappearing and new ones appearing, evolution and involution taking place very slowly. At this time there were probably more lesions present than at the beginning of the treatment. There were several on the parts adjacent to the nose, and the hyperæmia had increased. So striking was the resemblance to acne, that the case was again carefully investigated, but with the same diagnosis resulting. The same treatment—thirty-grain doses of potassium iodide, and one-twelfth of a grain of biniodide of mercury—was continued a month longer, but with no benefit. The local treatment was changed from time to time, the oleate, corrosive sublimate, red oxide, and the ordinary mercurial ointment all being tried.

Against my better judgment, or at least in desperation, the above plan of treatment was discarded, and the case treated as acne. At first there seemed slight improvement. The disease, however, continued, and after several weeks of varied treatment the result was negative. About this time there appeared a slight nodular swelling of the left ulna. The first impression of the nature of the eruption was thereby confirmed, and the antisyphilitic treatment resumed. Beginning with thirty-grain doses of the potassium iodide and one-twelfth of the mercury biniodide, the former, two weeks later, was increased to forty grains three times daily, and continued fourteen days. The nodular swelling disappeared, but the eruption was but slightly, if at all, influenced. The dose was now increased to fifty grains, and no improvement resulting, to one drachm. It was not until the drachm doses were given, that any change was noted.

From this time forward, however, the improvement was marked, and within three weeks after this dose had been reached the eruption had practically disap-

[1] Read at the eighth annual meeting of the American Dermatological Association, Highland Falls, New York, August 29, 1884.

peared. Up to the present time there has been no relapse. The scars, of course, still remain, and resemble, in size, character, and appearance, those observed to follow the so-called atrophic acne. There remains also more or less papillary hypertrophy. Up to the date of the administration of drachm doses, the eruption had fluctuated slightly from time to time, remaining, however, essentially the same; never violent, but of an indolent character. Strange to say, the stomach stood the large doses admirably. Nausea and irritation occasionally occurred, but seemed to be produced by the menstruum rather than by the potassium iodide, as a change of such was always followed by a disappearance of the gastric uneasiness.

While I am aware that large doses of the potassium iodide have been given in visceral and nervous syphilis, in the latter particularly by Dr. S. Weir Mitchell, yet in cases of cutaneous syphilis, such amounts, especially continued for so long a period, are unusnal. My own experience would indicate that it is rarely necessary to exceed the dose of thirty grains, three times daily, and in the great majority of cases ten-grain doses will suffice.

MEDICAL PROGRESS.

BALL WEIGHING FOUR POUNDS ENCYSTED FOR THIRTY YEARS.—M. VASLIN, at the recent meeting of the French Surgical Congress, exhibited a ball weighing about four pounds (200 grammes), which had remained encysted for thirty years. The projectile measured eight and four-fifths inches in circumference, and was extracted from the left side of an old soldier, upon whom M. Vaslin held a post-mortem the latter part of 1884. The man was wounded in 1855, but recovered very rapidly from the injury and never experienced any suffering from its effects until 1870. At this time the wound, which had been closed for fourteen years, opened and a fragment of clothing escaped. However, the pain occasioned thereby in his side and leg was not sufficient to interrupt the performance of his ordinary duties. In 1884, M. Vaslin was called to visit the patient, and introducing a probe into the fistula, above Poupart's ligament, discovered a hard body which he suspected to be a ball. Operation was refused, and in November, 1884, all the phenomena of a suppurating psoas abscess were established, and notwithstanding free incision and drainage the patient died.

The ball which penetrated the iliac fossa in 1855, had little by little until 1870, obeying the laws of gravity, traversed the muscles of the pelvis, and at this time arriving at the level of the iliac fossa caused the pain then experienced. During the fourteen years intervening the ball progressed along the bone, wearing a deep channel into its substance, extending from near the crest of the ilium toward the bottom of the cotyloid cavity, and at this time the ultimate manifestations occurred. The case, though rare, is not unique, both Larrey and Weis having reported similar encystment of bullets during a protracted period.—*Revue Médicale*, May 16, 1885.

THALLIN.—PROF. MARAGLIANO, at a meeting of the Italian Medical Society, held in Genoa, April 28, 1885, reported the results of his experiments made upon thallin. He observed that in apyrexia thallin exercises a slightly depressing effect upon the temperature, and that the pulse and respiration are also slightly diminished in frequency, while the intraarterial pressure is slightly increased.

In patients in whom pyrexia is present, thallin constantly lowers the temperature, the reduction varying with the dose. Doses of about 4 grains cause a reduction of about 1⅛° F.; doses of 7½ grains a reduction of from 1⅞° F. to nearly 6° F.; doses of 11½ grains reduced the temperature from 2⅓° F. to 7⅛° F.; while doses of 15½ grains cause a reduction of from 3½° F. to 8½° F.

The reduction of temperature ordinarily begins in an hour after the administration of the drug and attains its maximum in two hours if the diminution is about 2.7° F., and after three or four hours if it is greater. The effect of the drug persists from one to ten hours according to the dose. The reduction of temperature is ordinarily accompanied by perspiration, more or less profuse.

The disappearance of the fever is sometimes preceded by the shivering and chill. Frequency of the pulse and of respiration diminishes proportionately to the reduction of temperature and to the dose of the drug.

Thallin does not produce vomiting nor any other gastric disturbance, and may be administered in the quantity of 110 grains in twenty-four hours without inconvenience of any kind. It is found in the urine an hour and a half after its administration, and the greater quantity of it is eliminated in the first ten hours.

Twenty hours after the administration of the drug the urine does not give the characteristic reaction with the chloride of iron. After the administration of the drug the urine assumes a characteristic darkish-green color, which sometimes is absent after small doses. Prof. Maragliano has administered thallin in divers febrile diseases, and finds the fever depending upon pulmonary phthisis to be the least resisting, while that of fibrinous pulmonitis is the most intractable. Prof. Maragliano also finds that the drug diminishes the quantity of urea and of carbonic acid eliminated in twenty-four hours in apyretic subjects, and that it causes in the apyretic, as well as in patients with elevated temperature, a dilatation in the cutaneous vessels and an increase in the elimination of heat.—*Gazzetta degli Ospitali*, May 20, 1885.

THE INFLUENCE OF SALICYLATE OF SODA AND THE SALTS OF QUININE UPON THE PERIPHERAL CIRCULATION.—At a meeting of the Academy of Medicine, of Genoa, held April 28, 1885, Dr. Pedrazzi reported the results of his experiments to determine the effect of the salicylate of soda and the salts of quinine upon the peripheral circulation, of which the following are the conclusions:

1. Salicylate of soda produces dilatation of the peripheral bloodvessels.

2. Dilatation begins to be manifested in about two hours after the administration of the drug.

3. Dilatation from the indicated dose has a duration varying from two to four hours, after which the vessel tend to return to their primitive calibre.

4. During the peripheral dilatations the calorimeter shows an increased loss of heat from the cutaneous surface, an increase which in the first five minutes varies between 7⅛° and 9° F.

5. The normal temperature is either not modified or is scarcely lowered a tenth of a degree.

6. The sulphate and the bicarbonate of quinine dilate the peripheral vessels.

7. Along with the dilatation of the vessels the dispersion of heat from the cutaneous surface is increased.—*Gazzetta degli Ospitali*, May 20, 1885.

TREATMENT OF CHOLERA.—DRS. T. LAUDER BRUNTON and P. H. PYE-SMITH, at the conclusion of a paper upon researches relating to the pathology and treatment of cholera, say: We think that the directions in which further researches after a remedy for cholera are most likely to prove successful are:

1. The discovery of an antiseptic which will destroy pathogenic organisms in the intestine and prevent the formation of the cholera poison, while they are not themselves poisonous. Corrosive sublimate is a sufficiently powerful antiseptic, but it may itself prove poisonous to the patient as well as to the pathogenic organisms. It is possible that amongst the members of the aromatic group of bodies the desired substance may be found having the desired properties.

2. The discovery of some substance which will antagonize the action of the cholera poison after its absorption. As a preliminary step in this direction, further experiments are needed on the nature and action of alkaloidal substances obtained from cholera dejecta as well as from artificial cultivations in various media and under various conditions, electrical and otherwise.

3. Observations on the effect of stimulation of the mesenteric plexus by currents passed through the uninjured abdomen in poisoned animals and in patients suffering from the disease.—*The Practitioner*, June, 1885.

PRESERVATION OF SOLUTIONS OF COCAINE.—In an article on this subject in *Ephemeris*, May, 1885, the writer, after reviewing his numerous experiments to determine the best preservatives of solutions of cocaine, says: It will be seen that all these observations, extending over about six months, are insufficient to establish anything more than a strong probability that boric acid in the proportion adopted, namely, a half of one per cent., will protect these solutions, until they are used up in the ordinary practice; and, therefore, the writer takes advantage of this probability, and hereafter will abandon the use of salicylic acid for the protection of solution of hydrochlorate of cocaine, and substitute boric acid. This boric acid will be used in the proportion of 0.5 per cent. so long as there is no evidence of this proportion failing to protect. But in case it should fail in any considerable number of instances upon prolonged experience, the proportion will be increased to 1 per cent.

Some of the British journals have recently recommended camphor water as a good protective agent for these solutions, and rationally it should be protective as are all the substances belonging to the aromatic series, but camphor is more irritant, or less sedative to mucous surfaces than boric acid, and the proportion necessary to protect does not seem to have been yet carefully determined.

TWO CASES OF LAPAROTOMY PERFORMED FOR ILEUS.—At a meeting of the Berlin Medical Society, held May 6, 1885, PROF. BARDLEBEN exhibited two patients upon whom he had operated for ileus.

The first patient was a young man aged twenty-four years, who during his youth had frequently suffered from abdominal pains. August 17, he came to Dr. Frerich's clinic, suffering from intestinal obstruction, extremely violent vomiting, and with the abdomen greatly swollen. During the three succeeding days he was treated with opium and intestinal irrigation, but without any good result.

The diagnosis of ileus was accordingly made, and laparotomy performed. Abundant exudation was found in the abdomen, and the small intestine was found to be constricted at two points, at each of which incision was made, and the bowel released, but the intestine, nevertheless, did not regain its calibre at the constricted points. The bowel was, however, of moderate calibre, and its lumen such that it was not necessary to resect the portion between the two points of constriction. It was found, however, that owing to the macerating effect of the exudate upon the bowel at the ensnared regions, the serous coat was torn, and at these points, therefore, five fine sutures were introduced. At the conclusion of the operation considerable vomiting occurred, but the general condition of the patient was much improved. Large doses of opium were administered, and the bowels emptied by enemata. Notwithstanding the quantity of opium administered, the patient during the night succeeding the operation was very restless, and thereby removed the antiseptic dressing which had been applied to the abdominal wound. The swelling continued, and on the third day, when vomiting first ceased, it was evident that the wound had not cicatrized, but was still discharging pus abundantly. On the seventh day examination showed that superficial suppuration had been so abundant that although the peritoneum was healed at the bottom of the cavity opened by the incision, coils of the intestine were plainly visible, and even at one spot seemed to lay bare. Nevertheless, the case progressed favorably, and on the thirteenth day granulation had covered the intestinal coils, and perfect recovery took place, the patient at present enjoying perfect health.

The second patient exhibited was a man 47 years of age, who from early manhood had a left inguinal hernia.

April 23, 1884, he was seized with intense abdominal pain and severe vomiting. A week later he was brought to Prof. Frerich's clinic, and treated with opium and intestinal irrigation, with no beneficial results.

May 2d he was transferred to the surgical clinic. Examination showed that no strangulation existed, and the distended intestinal coils were plainly recognizable through the abdominal walls. The abdomen was very sensitive on the left side. The 5th of May the patient had a natural motion of the bowels and the vomiting ceased for one day, but then returned, though it was less violent than before. May 7th, the vomiting became more violent than it had previously been, and symptoms of collapse were developed with remarkable rapidity. Laparotomy was at once performed, and the intestine was found twisted upon itself, and retained in that condition through the existence of a firm exudate.

The malposition was remedied without difficulty, the exudate removed, and cure resulted without delay.—*Deutsche med. Wochenschrift*, May 14, 1885.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, JUNE 27, 1885.

GERMAN ANALYSES OF ENGLISH AND AMERICAN MEAT EXTRACTS.

IN view of the large number of meat preparations now in the market, and the merits claimed for them in the treatment of debility and exhausting diseases, it cannot fail to interest our readers to know how they bear the test of German scrutiny. A. STUTZER, of Bonn, has published in the *Berliner med. Wochenschr.* for April 15th, the results of an examination of nine preparations, including Murdock's liquid food, Valentine's meat juice, Johnson's fluid beef, Benger's peptonized beef jelly, Savory & Moore's fluid beef, Brand & Co.'s essence of beef, Reed & Carnrick's beef peptonoids, and Kemmerich's and Liebig's beef extracts, the first four being American, the next three English, and the last two German.

He first determined in each the proportion of organic matters, salts, and water, and then further treated the organic substances. In doing the latter he determined how much of the nitrogenous matters belonged to the easily digested albumen and pepton. He lays special stress upon these last, because on them the nutritive value of animal food depends. Two preparations, Carnrick's beef peptonoids and Johnson's fluid beef, contained albuminous substances in the form of fibrin, not soluble in water, of which the value must be determined by artificial digestion, since in this way only can be ascertained what proportion of the fibrin can be digested. He further noted the nitrogen in the shape of flesh bases, kreatin, carnin, etc., since these, with the potash and phosphoric acid associated with them, play an important rôle as food and stimulus for the nervous system.

The flesh extracts of Kemmerich and Liebig are chiefly used for healthy men, but are nevertheless recommended to convalescents to improve digestion and stimulate the circulation, results which are accomplished partly through the abundant flesh bases and partly through the phosphate of potash. This is in accordance with Liebig's own view, which did not claim for his extract any active nutritive power, but recommended it simply as a relish. Kemmerich's flesh extract contains a larger proportion of pepton and albumen, namely, 22 per cent., and he claims correctly for it the properties of a true nutriment, as well as a nervous stimulant.

Murdock's liquid food, which is an extract of beef, mutton, and fruits, made in Boston, is claimed to have 13½ per cent. of soluble albumen, which Stutzer has confirmed. The fluid contains 8.3 per cent. of alcohol, and on opening the well-sealed vessel the odor was not pleasant, and there seemed to be a partial decomposition of the contents, a tendency to which characterizes albuminous fluids if long kept, especially if they contain fruit juices prone to fermentation.

Valentine's meat juice, made at Richmond, Va., is also a fluid which contains kreatin, potash, and phosphoric acid along with a small quantity of albumen and pepton, and 59 per cent. of water.

Johnson's fluid beef, made in Canada, belongs, on account of its containing peptons and digestible albumen, to the better extracts, although the proportion of water is large, being 50 per cent. Stutzer found still more water, nearly 90 per cent., in Benger's peptonized beef jelly and Brand's essence of beef, of which the first is made in Manchester, England, the second in London.

The fluid meat—peptonized meat—of Savory & Moore possesses, according to Stutzer, very different properties. It contains chlorides in considerable amount, and is apparently made with hydrochloric acid in order to peptonize the meat, the acid being neutralized with sodium carbonate. In this method of peptonizing, with the aid of acids, Stutzer considers that the action proceeds too far and that the pepton resolves itself into substances, the nature of which is not precisely determined, but which probably do not possess the same nutritive value as pepton.

Essentially different from any of the above is the preparation known as beef peptonoids, made by Reed & Carnrick, of New York. It is a very fine dry powder, made of beef, gluten of wheat, and condensed milk, a mixture, therefore, of nitrogenous matters of animal and vegetable origin, and is easy of digestion. The gluten is carefully separated from other organic matters of wheat and contains only 1.25 per cent. of starch, and 0.25 per cent. of cellulose.

The determination of the nutritive value of these preparations can best be made by comparing the easily digestible albumen and pepton in the different preparations. In such a mode of comparison the most nutritious will be found to be Reed & Carnrick's beef peptonoids, of which 100 parts by weight contained the same amount of albumen and pepton as 178 parts of Johnson's fluid beef, 285 of Kemmerich's flesh extract, 482 of Murdock's liquid food, 745 of Brand and Co.'s essence of beef, 764 of Savory & Moore's fluid meat, 898 of Liebig's flesh extract, 902 of Benger's peptonized beef jelly, and 966 of Valentine's meat juice.

Reed & Carnrick's preparation contains, in addition to the nitrogenous matter, 10.67 per cent. of fat, and 10.02 per cent. of soluble non-nitrogenous matters in the shape of dextrin and sugar.

In this comparison, says Stutzer, Liebig's extract takes a subordinate position, because it is found to be only an appetizing, and not a nutritious substance. If, on the other hand, the comparison is made as regards the flesh bases contained in them, it is found that 100 parts by weight of Liebig's extract contain the same amount of nitrogen in the form of kreatin and carnin as 126 of Kemmerich's meat extract, 537 of Valentine's meat juice, 558 of Johnson's fluid beef, 1844 of Benger's peptonized beef jelly, 4161 of Murdock's liquid food, 5053 of Brand's essence of beef, and 7782 of Reed & Carnrick's beef peptonoids.

From the above very interesting analysis it will be seen that the different articles of food have a far different value, according as they are regarded as nutritive or appetizing, and the indications in each case should be carefully considered before they are prescribed. If these analyses are correct, and they bear the stamp of reliability, it is very evident that an undue value is claimed by the makers for certain of these preparations, and that physicians who have been basing their use upon the representations of the makers, rather than on actual chemical composition, will find a reason for any disappointment in results which they may have noted.

SPINA BIFIDA.

AT a recent meeting of the Clinical Society of London, the proceedings of which may be found in the London medical weeklies for May 30th, a committee, consisting of MR. HOWARD MARSH, MR. PEARCE GOULD, MR. H. H. CLUTTON, and MR. R. W. PARKER, made a lengthy report upon the pathological anatomy and treatment of spina bifida, which throws new light upon this not infrequent deformity.

By spina bifida is meant a congenital malformation of the vertebral canal, with protrusion of some of its contents, in the form of a fluid tumor, due, as a rule, to deficiency of the neural arches of the vertebræ, with consequent posterior projection of the tumor. The varieties met with are, first, meningocele, or protrusion of the membranes above; secondly, meningo-myelocele, or protrusion of the membranes, along with the spinal cord; and, thirdly, syringomyelocele, a condition characterized by protrusion of the membranes, together with the cord, the central canal of which is dilated so as to form the cavity of the sac, the innermost lining being formed by the expanded and atrophied substance of the cord. Of these three varieties, the second is the most frequent, while the first comes next, and the third last. In meningo-myelocele, the most common variety, therefore, the thin, translucent membranous covering of the tumor represents in part the attenuated spinal cord, and the nerves, which are always found on the inner surface of the wall of the sac, arise from the intramural portion of the cord, instead of being distributed to it, as generally described. In the other two varieties, it is interesting to note, from both a pathological and practical point of view, that the sac is free from nerves. From these facts, it naturally follows that spina bifida, instead of being a mere dropsy of the central canal of the cord, is due to a primary defect of development, or a want or arrest of differentiation, of the blastodermic layers of the embryo.

In view of the fact that the most common variety of the deformity consists in great part of nerve tissue, the committee express decided opposition to ligation and excision of the sac, and advocate the injection of Morton's fluid, a plan of treatment which shows a percentage of success of between 50 and 60. This fluid, it will be remembered, consists of ten grains of iodine and thirty of iodide of potassium to an ounce of glycerine. As absolute contraindications, they mention marasmus and hydrocephalus, while paralysis, a thin sac, or an ulcerated one, impulse between the tumor and the anterior fontanelle, and the presence of the cord in the sac, render the result uncertain. They also point out that the operation should not be performed, unless for special reasons, in infants under two months of age.

In his brochure upon the treatment of spina bifida by a new method, published in 1877, Dr. Morton gives the details of fifteen cases in which his solution was injected, of which twelve were successful, and three died; and up to the middle of 1882, not less than twenty-three cures were recorded out of twenty-nine cases. These results are so utterly at variance with our own experience with the remedy, that we can only account for them by the assumption that all of the failures have not been reported, and the percentage of failures derived by the committee would seem to warrant the correctness of this view.

FERRÁN ON THE MORPHOLOGY OF THE COMMA-BACILLUS.

FOR weeks past the daily journals have contained notices of the experiments and inoculations of DR. FERRÁN, of Barcelona, but the current number of Leyden's *Zeitschrift f. klin. Medicin* contains the first published account of his investigations upon the life-history of the comma-bacillus. He regards the organism as specific and distinct from all others, and the comma-form represents only one stage of its existence. By means of careful modifications in the modes of culture the development has been traced. In gelatine or in weak alkaline flesh broth the commas grow into long spiral filaments, in which small spore-like bodies may be seen, as in the hyphæ of the anthrax-bacillus. This stage is not reached in ordinary cultures unless means are taken to remove the part rendered fluid, as this contains ingredients poisonous to the growth. In neutral or weak alkaline flesh broth this development is most rapid, and a few hours at 37° C. suffice to exhaust and render acid the medium. If now, more neutral or weak alkaline broth is added and the temperature reduced to 15–25° C. very remarkable changes occur. Large antheridia or spore-like bodies are formed on the filaments, which become free and enclosed in hyaline capsules.

For the further development of these structures it is necessary to add to the culture medium from ten to twenty per cent. of human or hog bile, and to keep the temperature from 18° to 25° C. Under these conditions the spores grow and attain the size of red blood-corpuscles, or even larger, and assume a mulberry shape. From these bodies long thin protoplasmic filaments exude, which ultimately assume a spiral form, increase by division, and from them the original comma-form is produced. A plate giving illustrative figures of the various steps in the process accompanies the paper. The comma-bacilli, antheridia, and mulberry-shaped masses, were also found by Ferrán in his own stools during a slight attack of diarrhœa, which he attributed to infection from the cholera cultures. Detailed statements are given of the mode in which Dr. Ferrán prepares the cultures, so that his observations can readily be tested, and no doubt they will be carefully repeated by Koch and others.

There is one criticism which will occur to everyone who knows anything of the life-history of the micro-organisms of disease. The group of fungi, schizomycetes, to which the bacilli belong, multiply, so far as we know, only by fission and the formation of spores in the filaments. Now, Ferrán's description and figures show a development of conidia-like bodies such as occur in the hypomycetes (moulds), a morphological inconsistency which is opposed to all previous observations.

No information is conveyed as to the methods of preparing the cultures for inoculation, but from other sources it would appear that ordinary cultivations are employed. In persons so treated the blood contains micrococci, spirilla, and comma-bacilli, a rather suspicious circumstance, as the opinions of other observers seem unanimous that in true cholera the organisms are not in the blood. The inoculations may produce very troublesome sores on the arm, and, according to a correspondent of the *British Medical Journal*, several persons have died after submitting to the operation.

TORTICOLLIS.

IN the *Archiv für klinische Chirurgie*, Bd. xxx., 1884, may be found a noteworthy paper from the pen of PROFESSOR PETERSEN, of Kiel, in which the theory of Stromeyer, adopted by nearly all other writers, that torticollis results from rupture of one of the sterno-cleido-mastoid muscles during parturition, followed by cicatricial retraction, is combated. Petersen holds that subcutaneous laceration of the muscle leads to its elongation, and that the so-called hæmatoma of the muscle, instead of being the cause of the torticollis, is one of its effects, the muscle yielding readily because it is congenitally too short.

In a still more recent paper, published in the *Centralblatt für Chirurgie*, No. 14, 1885, PROFESSOR VOLKMANN, of Halle, considers the etiology of congenital torticollis, and bases his conclusions upon observations made upon the living subject. Being dissatisfied with subcutaneous section of the sterno-mastoid muscle in aggravated cases, he has successfully resorted, in at least twelve instances, to its division through a free incision carried along the inner border of the muscle, and as the result of minute examinations of small sections of the muscle, and of the discovery of bands of contractured tissue, he arrives at some conclusions which throw great light upon the affection, and seem to show that, as in talipes, adapted shortening of the fasciæ and other tissues maintains the deformity after the involved muscle has been thoroughly divided.

In some cases the muscle and adjacent tissues had undergone no changes whatever. In others, the muscle, to the extent of several inches, was converted into a white, comparatively non-vascular, tendinous mass; its sheath was not demonstrable, being united to the altered muscle by cicatricial bands; the sheath of the vessels was thickened, and the deep fascia was converted into resisting bands. In a third class of cases, the changes were not so marked, the muscle being the seat of a circumscribed callous patch, or traversed by a few tendinous cords. In none of the cases was there the slightest evidence of fatty transformation.

From these observations it follows that certain cases of torticollis result from trauma during delivery, which is followed by inflammation of the muscles and associated tissues. The changes which are met with are indicative of an active process, and Volkman thinks that they disprove the view of Petersen, who attributes the shortening of the muscle to a vicious position of the fœtus in the uterus.

SOCIETY PROCEEDINGS.

NEW HAMPSHIRE MEDICAL SOCIETY.

Ninety-fifth Annual Meeting, held at Concord, June 16 and 17, 1885.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 16TH.—FIRST DAY.

MORNING SESSION.

THE meeting was called to order by THE PRESIDENT, JOHN WHEELER, M.D., of Pittsfield.

After the report of the Committee of Arrangements, the Secretary, Dr. G. P. Conn, read the report of the Council, concerning a memorial from the Woman's Christian Temperance Union, of New Hampshire, asking the Society to make some expression of opinion upon the question of

PRESCRIBING ALCOHOLIC STIMULANTS,

which had been considered, and was reported upon as follows:

Resolved, That the members of the New Hampshire Medical Society fully indorse the position taken by the American Medical Association at St. Paul in 1882, regarding the "conscientious caution in the prescribing of alcoholic stimulants," and regard the same as one of the primary principles of the profession, to which the members of this Society have always adhered and will continue so to do.

The request of the Medical Society of New Jersey for coöperation in an effort to elevate the standard of

MEDICAL EDUCATION

was introduced, and it was voted to indorse the report of the Medical Society of New Jersey, and that a committee be appointed to report upon the same at the next meeting of the New Hampshire Medical Society.

The proposition of the American Medical Association to establish

A STATE BOARD OF MEDICAL EXAMINERS

was favorably reported upon, and a committee appointed to memorialize the New Hampshire Legislature for the passage of a bill in accordance with the recommendations of the American Medical Association at its last meeting in New Orleans.

DR. WHEELER then read

THE PRESIDENT'S ADDRESS.

He said the Society should sustain good morals, good sanitary measures, and good laws, and the State should protect all these essentials to society and humanity. The laws of our State exact no especial requirements of clergymen except that of good morals; the law is a path of more legal responsibility, but the medical profession is the most important of them all to humanity and to society. His touch must be trained, his hearing acute, his memory ready, and he must be full of judgment else life may be sacrificed. His duties are often immediate and sudden, and he must be prepared for all emergencies. He should be a man of much wisdom.

A doctor is confronted and surrounded by strong legal obligations and responsibilities. Suits of malpractice are among the liabilities and are not unfrequently brought without any grounds upon which to base the charge. To avoid malicious suits, a bond should be given by the plaintiff before a suit is commenced, to reimburse the physician if the case is not sustained. The laws of our State allow six years in which to bring a suit, and in the case of a minor twenty years. One year should be the limit. The patient could lose no legal right thereby, while the physician would have some protection. Legislation to limit the time to one year was suggested.

Hygiene has been fostered by the physicians, and the State Board of Health is the outgrowth of this after a struggle of several years. Although the Board is young its work has already been of great value to the State, and it is doing much to restrict disease. Should cholera or any serious epidemic occur in the State, we should look to this Board for relief and to save life.

Medicine is still progressive, Much that was once held to be valuable in the treatment of disease is now cast aside as worthless, or is supplanted by something much better. The progress is rapid. Much has been accomplished in the last thirty years, as witnessed in chemistry, pharmacy, therapeutics and surgery. The discovery of disease germs was a wonderful stride, and physicians may now cease to wonder how diseases and epidemics are scattered broadcast. The investigations of Pasteur, Koch, Kline, Sternberg, and others, have given a great impetus to the germ theory of disease. The results are still shaded by doubt, but they are the prelude to greater discoveries in the future.

A centennial of the Society in 1891 was recommended, and a history of the Society for its first one hundred years. A record of its illustrious and distinguished members will be of much value and interest, and it is due to history that one be prepared.

DR. WM. CHILD, of New Hampton, read an essay entitled

"SANITAS, SANITATUM, OMNIA SANITAS,"

which was directed to the exposure of medical shams. In the profession are to be found truth and science which are ennobling to the medical faculty, but still it is full of shams, among which are many new remedies, pills, pellets, and powders; many of them are half secret and proprietary. The worst of all is that they are daily increasing, and most of them are for incurable diseases. The tendency is too strongly towards shams and shoddies. The regular medical journals advertise them in high-colored language, with testimonials. They are written for physicians only. When we wrangle over our code, and covertly act in violation of such code, then we are open to severe criticism. The physician who practises by the last medical journal may be a progressive one, but he is not a safe one. Still, disease has not decreased. Well-tried medicines have been abandoned for those but little known.

DR. T. B. SANBORN, of Newport, read a paper on

EPILEPSY.

This disease has been subject to much study, yet without much satisfaction in the results obtained. Lesions of the cord were shown by Brown-Séquard to cause the disease. Heredity plays an important part in the disease, and the mental faculties are generally impaired. It is sometimes simulated, a novel test being to tickle the bottoms of the feet. The bromides should not be used in anæmic cases. The drug is valuable, but it should be used with caution. It must be used in increasing quantities to be effectual, hence one of its dangers. The sodium salt is preferable. Nitrite of amyl is valuable in many cases. A plain but nutritious diet should be prescribed. Iron and quinine are of great service.

AFTERNOON SESSION.

DR. C. B. NICHOLS, of Franklin Falls, read a paper on

GYNECOLOGICAL DIAGNOSIS.

He asserted that many physicians refuse or neglect to examine into diseases embraced in this department of medicine and surgery, and too often ridicule those who make a specialty of this branch of practice. First, a proper examination of the patient is necessary, and for this purpose a properly constructed table is indispensable. The Chadwick table was recommended as one of the best. Reflex uterine neuroses are often manifested by headaches, pain in the back nausea. melancholia, and many other symptoms. He believed the greatest advance made for many years in this department was by Emmet in the operation which he conceived in 1861, and which was made public in 1869. It has stood the test of time as well as heated opposition.

DR. H. M. FRENCH, of Concord, then read a paper on

NASAL CATARRH.

The causes are many and varied, but the most common are cold from drafts, etc., heredity, inhalation of dust, fumes of certain substances, etc. Iodide of potassium will frequently produce it. Unventilated halls and churches are prolific causes. All the mucous membranes of the head may be involved. The first stage is dry, the second consists of a thin discharge which next thickens and then again becomes thin and disappears. It may be the precursor of bronchitis, pneumonia or other inflammatory condition; the chronic form follows. The disease may be due to heredity, or may from the first assume a chronic form. The mucous membrane of the nose thickens, and the septum is sometimes turned to one side and necrosis may follow. The discharges are purulent in this stage, and in some instances casts of the nostril are thrown off. In simple cases relief and recovery may be expected, but in severe chronic cases relief only may be obtained.

Cleanliness and drainage are two elements of success. In treatment the spray system is the best in both acute and chronic cases. The spray is so fine as to reach all parts, and the relief in some cases is almost instantaneous. Sniffing salt water and the use of gargles are of little use. A spray apparatus was exhibited. Carbolic acid, carbolized glycero-tannin, and other medicaments in spray were recommended. The relief is rapid, and the treatment is agreeable to patient. Sponge-bathing, friction of skin, good diet, and other hygienic conditions are also essential.

A REPORT ON SURGERY,

by DR. G. H. BRIDGEMAN, of Keene, was read by DR. C. R. WALKER.

The plaster splint was taken up, and its origin discussed as well as its virtues, including its wide range of application. Statistics of gunshot wounds of knee-joint, and results and treatment in European wars, were given. A report of an interesting case in the writer's practice was given in which a small pistol-shot passed through the knee-joint. The case was treated as a simple puncture. The knee was fixed, and constant irrigation maintained from a pail of water, from which candle wicking was suspended. Cases in the practice of others were referred to. Ligation of subclavian artery in its second part was reported, but the case proved fatal, probably from the accident which necessitated the operation.

Cocaine was discussed, and its possibilities referred to. He had used it in several conditions. In acute gonorrhœa he had found great relief from this and iodoform made into a pencil and applied three or four times daily.

EVENING SESSION.

DR. C. R. GIBSON, of Woodsville, presented a paper on

ANÆSTHETICS.

Chloroform, except with the very young or very old, is a dangerous anæsthetic. This truth is beginning to dawn on the English, and their surgeons are giving it up and using the formula A. C. E. We should never hesitate to give ether; unfortunately it is disagreeable to many. Many apparatus have been devised for its administration, but they are generally failures. They have many objections. The old funnel made of paper with napkins is nearly as bad. The patient should have pure air at each inspiration saturated with ether. He recommended the use of a well-worn napkin with one thickness, kept wet with ether, drop by drop. From five to eight minutes are sufficient in most cases to produce anæsthesia. The violent struggle is nearly done away with by these means, and the nausea is very slight. The room should always be kept quiet during the administration of an anæsthetic. This is the writer's method, and has always been attended with success. Much will depend upon the skill of the physician, which can be attained only by practice.

A REPORT ON OBSTETRICS,

by DR. J. WALLACE RUSSELL, of Concord, was read. Corrosive sublimate, 1 part to 1000 or 2000 parts of water, was recommended as the most valuable antiseptic in obstetrics. Many cases of extrauterine fœtation have been reported during the last year, and electricity has proven the most efficient remedy. An interesting case occurring in the practice of the writer was reported. The case was so peculiar that a diagnosis could not be made.

DR. EDWARD FRENCH, of Concord, read a paper on

MELANCHOLIA.

At the present time these cases are met with in daily practice. No phase of mental disease so engages our sympathies. In every case the thought of suicide is

present sooner or later. Hallucinations of all varieties exist—of taste, hearing, and smell; that of sight is less common. Religious hallucinations are often present. The efforts at suicide are of the most terrible kind, often taking the form of mutilation. It is almost impossible to distinguish the acute cases from acute dementia. It is a suicidal mania. Some interesting cases in the writer's experience were given to illustrate the phases of an acute case. In one case the patient killed himself by pouring scalding water upon his abdomen. Egotism and conceit are frequently marked symptoms. There were 423 cases of suicide in March, April, and May, in the United States. Inability to sleep is one of the first symptoms. Chloral hydrate should not be used, and the bromides sparingly. Opium alone, or combined with hyoscyamus, is a good remedy. Walking with an attendant several miles daily will generally induce sleep. It is important that the patient eat well. The nasal tube is the best for giving forced food; there is, then, no need of forcing open the mouth, and no choking. Mechanical restraint is the best, if any is required. Tonics and cathartics are needed in all cases. The patient should leave home and all old surroundings; this is important. The hospital is the place for most cases. With proper treatment, 60 per cent. should be restored to health. This paper was an interesting one and well received.

WEDNESDAY, JUNE 17TH.—THIRD DAY.

MORNING SESSION.

The reports of delegates to Dartmouth College, and the various medical associations, were presented.

DR. J. W. PARSONS, delegate to the American Medical Association, rendered a report of some length and considerable interest to the Society.

The resolution of the American Medical Association, adopted at its last meeting, at New Orleans, relative to the Code of Ethics, was adopted by the Society.

The report of the Treasurer was read and accepted. The report showed a balance of $550.02 in the hands of the Treasurer.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. George A. Crosby, of Manchester.
Vice-President.—Dr. C. P. Frost, of Hanover.
Treasurer.—Dr. D. S. Adams, of Manchester.
Secretary.—Dr. G. P. Conn, of Concord.
Executive Committee.—Drs. C. R. Walker, of Concord; George D. Towne, of Manchester; J. R. Kimball, of Suncook.

The Executive Committee reported, in part, the programme of the next meeting as follows:

Report on Therapeutics—Dr. J. Frank Brown, of Manchester.
Report on Necrology—Dr. E. L. Carr, of Pittsfield.
Report on Practical Medicine—Dr. I. H. Adams, of Derry.
Report on Surgery—Dr. C. B. Hammond, of Nashua.
Report on Obstetrics—Dr. Frank Blaisdell, of Goffstown.

The meeting then adjourned.

ONTARIO MEDICAL ASSOCIATION.

Fifth Annual Meeting, held at London, June 3 and 4, 1885.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, JUNE 3D.—FIRST DAY.

THE Association was called to order at eleven o'clock by THE PRESIDENT, DR. WORTHINGTON, of Clinton.

The forenoon session was taken up with the reception of members and general business.

AFTERNOON SESSION.

DR. POPE, of Bothwell, presented a

CASE OF CEREBRO-SPINAL MENINGITIS,

which began last January and was characterized by high temperatures, the highest being 107½° F., followed by a continuous elevation of 105° for two weeks. There has been gradual but steady improvement.

THE PRESIDENT then delivered his

ANNUAL ADDRESS.

He thanked the Association for the honor conferred on him in electing him to preside. He then briefly reviewed the progress of medical science during the eighteenth and present century. He dwelt more particularly on the changes that had taken place in the treatment of fevers, especially in reference to the use of cold water. He hoped the progress of the past may be but an earnest of the progress of the future.

DR. JOHN L. BRAY, of Chatham, then reported a case of

CÆSAREAN SECTION,

which terminated fatally.

DR. JENKS, who assisted at the operation, gave a lengthened description of the case with his views of the relative merits of Cæsarean section and craniotomy. He was strongly in favor of the former operation, which should in all cases be performed early. In the discussion which followed, a general preference was expressed for craniotomy to Cæsarean section, while many thought that Porro's operation, or some modification of it, should have been resorted to in the case reported.

DR. TYE, of Chatham, introduced the discussion on

DIPHTHERIA

in a most exhaustive paper, in which he pointed out that the disease does not stay its ravages for country or climate, and it is not ashamed to claim its victims in the house of poverty or fears to enter the home of luxury.

The people of Ontario are rapidly becoming educated in sanitary matters, and there are fair prospects that the prevalence of this disease as well as of many others, will soon be limited. The country owes much to the Board of Health for its energy, intelligence, and thoroughness in carrying out the provisions of the Health Act. The health report states that in the whole catalogue of diseases, none so persistently maintains its hold on a locality when once introduced as diphtheria. He then dealt with the various causes of the disease, its prophylaxis and treatment, local and constitutional, especially the latter, on which he places greatest reliance.

DR. BROUSE, of Brockville, in the discussion that followed, said that in some serious cases he had resorted to

calomel. He gave forty grains at the first dose; at the expiration of twelve hours, a dose of thirty grains, and another dose of thirty grains after twelve hours more, making 100 grains in twenty-four hours. The results in this and other cases were so satisfactory that he recommended this treatment in similar cases.

DR. GRAHAM, of Toronto, suggested the application of blisters to the body to form a raw surface, on which diphtheritic exudation might occur, and possibly thus relieve the throat.

DR. FRASER, of Sarnia, followed with a paper on

CONTINUED FEVERS.

He deprecated the use of the term typho-malaria as incorrect, there being no such hybrid disease. Cases called typho malaria are simply typhoid, running an irregular course.

DR. BUCKE, of London Asylum, believed there was a fever occupying the middle ground between typhoid and malarial fevers. Just as enteric fever had been in time separated from typhus, so would there be a fever with distinct pathological conditions yet found to exist here.

EVENING SESSION.

DR. NEWTON A. POWELL, of Edgar, introduced the

DISCUSSION ON PLASTER SPLINTS.

He traced the history of this mode of treating fractures. He advised the use of the finest dental plaster only, the common kind used by plasterers not being suitable for surgical purposes. He strongly urged this method for the following reasons: 1. The fit being perfect, there is little liability to displacement. 2. Support sufficiently firm to prevent displacement is obtained before the busy practitioner has to leave his patient. This is not the case with any similar plastic material. 3. Compression is uniform, limiting extravasation, and controlling muscular spasm. 4. In some form these dressings can almost always be applied at first visit. 5. The material is always at hand, and costs little. 6. The apparatus made from it can be depended upon not to contract in drying, as those made from the plastic materials do. 7. They are sufficiently porous to permit the escape of perspiration.

DR. HOWE, of Buffalo, read a paper on

ALBUMINURIC RETINITIS,

which he illustrated by a series of stereopticon views of the retina in different stages of the disease. The paper was very interesting, and Dr. Howe was tendered the thanks of the Association for it.

DR. GROVES, of Fergus, read a paper on *Urinary Calculi*, and DR. EDWARDS, of London, one on *Placenta Prævia*.

THURSDAY, JUNE 4TH.—SECOND DAY.

MORNING SESSION.

DR. TEMPLE, of Toronto, presented a paper introducing the discussion on *Intrauterine Medication*, in which he discussed the various materials in general use for that purpose, and the conditions under which each is applicable. He esteemed iodized phenol highly, and invariably used it now instead of Churchill's iodine.

DR. EDWARDS presented two cases of

PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS,

in two brothers aged ten and twelve. The older became affected six years ago, the younger about three years. The younger was still able to move about.

DR. STEWART, of Montreal, thought that if such cases were treated early by galvanization, a cure might be effected.

DR. PARKS, of Buffalo, read a paper on the *Surgical Sequelæ of the Exanthematous and Continued Fevers*.

DR. BRODIE, of Detroit, President of the American Medical Association, who had just arrived, was introduced and most cordially received. He expressed his thanks, and said he attribued his kindly reception largely to the fraternal feelings entertained for the Association over the line.

AFTERNOON SESSION.

Owing to the pressure of work, the Association divided into medical and surgical sections.

SURGICAL SECTION.

DR. W. T. AIKINS, of Toronto, presiding.

DR. ATHERTON, of Toronto, read a paper on

INTESTINAL OBSTRUCTION.

He gave a brief *résumé* of the cause, diagnosis, symptoms, and treatment of both acute and chronic cases, dwelling especially on the former, of which he has met seven cases during the last five years. One of the chief characteristics of acute obstruction is the *sudden onset* of symptoms. In cases of strangulation by bands and of volvulus there is absolute constipation, not even flatus passing. In intussusception frequent bloody stools occur very generally, with more or less tenesmus. In all cases fecal vomiting usually supervenes in the course of a few days. Symptoms of collapse set in sooner or later, according to the age of the patient and severity of the attack. In the diagnosis of intussusception from dysentery, Dr. Atherton thinks the color of the dejections of considerable significance. In all the cases of the former affection he has met with, the discharges were of a *bright pink* color, contrasting strongly with the dark clots and beef-tea-like stools of dysentery. In his cases also there was little or no mucus discharged; this may have been due to the fact that the invaginated bowel did not reach as far as the rectum.

When rest in bed with very spare diet, a few full doses of morphia, the use of several enemata through a long tube, and one or two washings out of the stomach fail to relieve the symptoms, he advises resort to laparotomy after two, or, at most, three days. One of the chief difficulties met with in this operation is the tendency of the distended intestine to escape through the abdominal opening. Very often it is necessary to puncture the gut to permit of its return after relief of the obstruction. The puncture should be made with a very fine trocar, else some fecal extravasation will result. This is due to the overdistended gut having lost its normal contractility.

DR. ADAM H. WRIGHT, of Toronto, read a paper on

THE TREATMENT OF INEVITABLE ABORTION.

He referred to the two plans of treatment, which had been called the expectant and radical methods. In the former, the case is left chiefly to the natural efforts to complete expulsion. The dangers from this are chiefly hemorrhage and sepsis. In the radical method, the uterus is emptied as soon as possible, the cervical

canal being dilated if required. Unnecessary violence is sometimes employed, and the dangers are inflammation and sepsis. The truth probably lies between the two extremes.

He advised, in cases where hemorrhage exists, and cervix is dilated or dilatable, to empty the uterus at once with the finger, in preference to any other instrument. When cervix is not dilated, plug vagina; avoid, if possible, the use of the tent on account of its dangers.

DR. MURRAY, of Thorndale, read a paper on

HEMORRHAGE AFTER ABORTION.

He related the histories of six cases which had been treated by him. He showed the great danger of prolonged hemorrhage from the resulting anæmia alone as well as from other accidents, such as septicæmia. He also illustrated the dangers of injections of iron.

The two papers were taken together and discussed by the Chairman, Drs. Oldright, Temple, Henderson, Powell, and Edwards.

DR. REEVE, of Toronto, introduced the discussion on

COCAINE HYDROCHLORATE

by giving a succinct account of its uses generally and in the treatment of diseases of the eye especially.

DR. HOWE drew attention to two points on which he would like to throw some light: 1st. The desirability of obtaining an exact measure of the amount of anæsthesia from the drug; this is found in the effect on the blood pressure, as measured by the kymograph. 2d. The desirability of noting definitely the reputed ill-effects in irritation said to result from the drug. From a large series of experiments he found no irritating effect of any consequence. He concluded that it does the maximum of good with the minimum of evil.

DR. OLDRIGHT, of Toronto, exhibited a large *Meckel's Diverticulum*, which extended into the umbilical cord and was injured in cutting the cord, and reported a case of *Diaphragmatic Hernia* in a child aged five years. Part of the colon and the kidney were found in the thorax.

DR. HARRISON, of Selkirk, read a paper on *Foreign Bodies in the Larynx*, with the report of a case.

MEDICAL SECTION.

DR. GRAHAM, of Toronto, presiding.

DR. HENDERSON, of Kingston, read a paper on

PULMONARY CAVITIES.

He entered at length into the pathology of phthisis and the relation of the bacillus of tuberculosis thereto. He said that the bacillus is to be found in all forms of the disease and believed it to be chief if not the only direct cause. He pointed out that the practical application of Koch's great discovery has already commenced in the use of greater cleanliness and antiseptic inhalations now practised in the treatment of consumption. It is also possible that the bacillus may be so cultivated as to produce a mild form, which may be inoculated with success as is done in smallpox and anthrax.

DR. OWEN, of Arkona, presented a case of

TRIFACIAL NEURALGIA

in a young man. The hypodermatic injection of morphia was the only remedy that had so far proved efficacious in his hands.

DR. GRAHAM next read a paper on

INITIAL STENOSIS.

He showed a specimen and gave a full history of the case from which it was obtained.

DR. DUNCAN, of Thamesville, presented a paper on

WARBURG'S TINCTURE IN CANADIAN PRACTICE.

He advocated its use instead of quinine, as it gave better results in his experience. The majority of those present considered that quinine, when needed, was more to be relied on.

DIET IN DISEASE

was the subject of a long paper by DR. ARNOTT, of London. He said there is a large class of disease which, though not often fatal, are yet the cause of much suffering and impairment of usefulness; and in the treatment of which the profession has not made satisfactory progress. Several disorders have their origin in the consumption of more nitrogenized food than the constitution or circumstances of the person require, and consequently the regulation of the amount of albuminoid food consumed often constitutes a valuable therapeutic resort. Many diseases may be completely cured and others benefited by excluding albuminoid food from the diet. Vigorous outdoor exercise may answer the same purpose, but such is obviously often unobtainable. In Bright's disease, the diet should not include albuminous food. Foul breath, not due to any local affection, will invariably be rapidly cured by non-nitrogenous diet without the aid of medicine. He mentioned a case of asthma in which this diet in a month had produced great improvement, and upon tasting meat one day he had symptoms of return of his ailment. It is an absurd notion that a person will get weak on this diet. Albuminoid food is a true stimulant, and the want of it is felt by the patient, yet sensations must not be taken for reality.

ELECTION OF OFFICERS

resulted as follows:

President.—Dr. George Archer Tye, of Chatham.

Vice-Presidents.—Dr. Henry Arnott, of London; Dr. James A. Temple, of Toronto; Dr. Robert W. Hillary, of Aurora; and Dr. William H. Henderson, of Kingston.

General Secretary.—Dr. John E. White, of Toronto.

Treasurer.—Dr. James E. Graham, of Toronto.

Corresponding Secretaries.—Dr. A. H. Wright, of Toronto; Dr. John Campbell, of Seaforth; Dr. Aylesworth, of Collingwood; and Dr. John C. Mitchell, of Enniskillen.

Toronto was chosen as the *next place of meeting*, in June, 1886.

COLLEGE OF PHYSICIANS OF PHILADELPHIA,

Stated Meeting held June 3, 1885.

THE PRESIDENT, J. M. DA COSTA, M.D., IN THE CHAIR.

THE PRESIDENT presented, for DR. JOHN GRAHAM, the following report of

CASES OF POISONING BY CARBONIC OXIDE DUE TO A DEFECTIVE FURNACE PIPE.

On March 9th I was called to see the following cases of poisoning from the inhalation of carbonic oxide, the

poisonous gas being conveyed by the hot-air flue from one of our ordinary cellar heaters to the sleeping apartments of the patients.

The heater was situated in the middle of a large cellar; had been in use for a number of years, and each autumn had undergone some repairs. It consisted of the ordinary iron heater, enclosed by brick, forming a hot-air chamber. Inside the air chamber was a terra-cotta pipe, running from the heater, and penetrating the wall of the chamber, thence to the chimney, to carry off the products of combustion. This pipe was cracked for eighteen inches of its length, the crack being open half an inch; and, unfortunately, the crack was in the air chamber. This break is now known to have existed for several years; but up to the time of which I write had apparently produced no worse effects than annoying the family with a smell from the heater. Something more was needed to change the chronic poisoning into acute. The chimney furnished the addition needed. Like too many of its kind, it had several angles, when it might just as easily have been perpendicular, from cellar to roof. It formed part of an outside wall, and the frost had loosened some of the bricks near the top, which, falling down and lodging at one of the bends, partially obstructed it. Complaints came from the servants that the heater drew badly, but the cause was never carefully sought for. Steadily the disintegrating effects of frost and air on brick and mortar continued, until at the time of the accident the chimney was completely blocked. Of course, it is highly probable that on the day in question a more than ordinary quantity had fallen, blocking it suddenly, else we would have had our patients complaining of sickness as well as smells, which they did not.

The patients, Mr. R., aged 78 years, Mrs. R., aged 74, went to bed on the evening of March 9th, about 10 o'clock. Both were in perfect health and good spirits, and the only thing Mrs. R. remembers noticing was that the smell from the heater was a little stronger than usual. Fourteen hours after, the servant, alarmed at their not appearing to her calls, broke in the door and found them unconscious.

When coal is burned with a free supply of air, which, of course, necessitates an unobstructed chimney, the chief product is carbon dioxide. When burned with a deficient supply of air, as when the outlet is obstructed, the product is carbonic oxide. The first is poisonous when inhaled in sufficient quantity; three per cent. of the latter has been shown to produce death in animals in thirty-seven minutes. Carbonic oxide is a little lighter than air, and when heated ascends rapidly. In the case of my patients, the obstructed chimney diminished the supply of air to the fire, and the resulting product was carbonic oxide. Its tendency was to ascend. The chimney allowed no exit, so the crack in the terra-cotta pipe gave out the deadly product, and it ascended by the convenient hot-air flue to the open register in the bedroom, which, with closed windows, contained its unsuspecting victims. Carbonic oxide is tasteless and odorless. We cannot recognize it by any of the special senses. The products of ammonia, sulphur, tar, are what make up the odors from burning coal.

When found, Mr. R. was breathing rapidly with loud bronchial râles, and his skin was dark and congested. Both had vomited some time during the night, and their mouths were covered with frothy mucus. The extremities were cold; pupils dilated, and insensible to light. Patients were allowed plenty of fresh air. Whiskey was given by the rectum, also hypodermically. Ammonia was given by the mouth whenever they were able to swallow, and warm applications were made to their bodies.

In the case of Mr. R., the labored breathing increased, the blood became more and more carbonized, and he died thirty-six hours after the discovery of the accident, without regaining consciousness. There was no failure in his heart, the pulse being full, but increased in frequency. He evidently died from pulmonary œdema. His chest was dull on percussion, the lungs filled with fine râles. For a few hours before death, his temperature rose rapidly, and reached as high as 106°. He had no paralysis.

Mrs. R., when found, was pale and breathing almost imperceptibly. The same means were used in her case to produce reaction, and slowly and gradually the heart's action increased; by degrees the intellectual faculties were aroused, and the patient with much effort was able to inform us that from the time of going to bed until the return of consciousness all was blank. She had suffered no pain; remembered nothing. Her pulse at this time was 60, small and compressible. Respirations, 14; temperature below normal. She was kept in the horizontal position. Liquid nourishment was given, with small doses of whiskey, and Basham's mixture ʒss four times daily. The brain worked slowly, and she spoke only when roused up, and then dropped back into semi-consciousness. The tongue was coated, and had a slight tendency to dryness; bowels costive; appetite poor. Her improvement progressed slowly, but at the end of seven days she was able to sit on a chair by the side of the bed. The pulse increased somewhat in volume, but the patient remained drowsy, falling into the same dull condition, unless when roused by noise, of which she complained greatly, saying it hurt her head. She also complained of intense pain in her back, running down the legs. At no time in the progress of the case did her urine contain either albumen, sugar, or tube-casts. Her blood was not examined.

Patient continued in about the same condition for three weeks following the accident. The Basham's mixture having been succeeded by pills of carbonate of iron, and the whiskey omitted. Pulse 60 to 70; temperature varying greatly from slight causes, from 98° to 103.5°, but mostly normal; anæmia very marked.

On the morning of the twenty-first day following the accident, the patient, while sitting on a chair, was taken very ill. A deadly pallor overspread her countenance, the jaw dropped, the limbs relaxed, and she became unconscious, convulsive twitchings passing through her body. We quickly placed her in the recumbent posture, and, after a hypodermic of whiskey, she slowly opened her eyes and asked, in an excited tone, "What is the matter?" The supposed cause for the sudden change, was that our patient's digestion since commencing the iron had been gradually growing worse, the tongue drier and more coated, the appetite poorer. I had realized that this digestive trouble was from the iron, but continued it up to this time on account of her profound anæmia. I now reluctantly stopped it, and

put her on dilute muriatic acid, ten drops every three hours, with pepsin after food, and enjoined absolute rest in the recumbent posture. The temperature on reaction reached 102°; pulse 120. The pupils were still further dilated; the reasoning power was all gone; answered questions with difficulty, and in monosyllables. The tongue became very dry, and it was almost impossible for her to protrude it. Stools were watery, frequent, and involuntary.

At this time the patient was seen by Dr. J. M. Da Costa, who advised the continuation of the acid, careful nourishment, and keeping the bowels open. The treatment resulted favorably. In forty-eight hours the tongue regained its moisture, the appetite improved, and the dulness of the mind diminished, though the patient still continued to have delusions and hallucinations, and the memory for certain words, and familiar words, was poor. On Dr. Da Costa's second visit on the twenty-sixth day of her illness (April 3d), the acid alone having been continued in the meantime, our patient was much better, tongue moist and clean, bowels natural, and, excepting the anæmic appearance and mental dulness, she was doing well. We then put our patient on the same diet, milk, beef-tea, mutton broth, etc., without solids, and stopping the muriatic acid, gave tinct. ferri chlor. ten drops, liq. potas. arsenitis, five drops, four times daily. This treatment was continued off and on until April 19th, the forty-second day of her sickness, when it was finally abandoned. Its use for a few days was invariably followed by dry tongue, loose bowels, and increased mental disturbance. This was also the case when we tried the arsenic without the iron. On resuming the muriatic acid, the tongue would regain its moisture, the bowels become regular, and the mind somewhat improved, but the anæmia, as shown by feeble pulse, pale skin, bloodless conjunctiva, continued.

On April 19th I noticed twitching in her left forearm, which was firmly flexed on the arm, and the hand on the forearm; the mouth was slightly drawn towards the left side. I then stopped the iron and arsenic and returned to the muriatic acid treatment. The rigidity of the left arm was followed by partial loss of power in the same, the patient raising it with difficulty, and not being able to grasp with it as firmly as with the right. Her mouth became drawn still further towards the left; it was, therefore, a case of alternate paralysis. She swallowed with increasing difficulty, and had involuntary movements of urine and feces. Sensation in the fingers remained good. Patient remained about the same, except that the bowel movements decreased in number, and the tongue regained its moisture, after again substituting muriatic acid for iron and arsenic, until Dr. Da Costa's third visit, on April 26th, the forty-ninth day of her illness. He advised the continuation of the muriatic acid. She also had an application of dry cups to the back of her neck. The paralysis, which we concluded was probably caused by an effusion near the base of the brain, slowly passed away, but the anæmia was almost as marked as ever.

On May 5th we began the use of ferri phos. cum ammon. cit. gr. ij, dissolved in 10 ♏ of distilled water, hypodermically, daily, but, as it was followed by some hardening of the cellular tissues, and produced disturbance of pulse and temperature, we abandoned the use of the iron hypodermically, and gave it by the mouth in two grain doses, morning and evening, also continuing the muriatic acid. From this time the improvement was progressive. The appetite increased, bowels became regular, the left hand and arm continued to regain their power, the deviation of the mouth to the left steadily diminished, and the patient became interested in her surroundings, and asked and answered questions with increasing intelligence. The pupils gradually diminished in size, and on May 20th, seventy-three days after the accident, our patient was sitting up, and four days after was able to walk into an adjoining room.

DR. J. M. DACOSTA said: In regard to this case, which has been so thoroughly worked out by Dr. Graham, there are several points which strike me as being of special interest. In the first place, the serious parts of the case came on late. For a time the patient was apparently doing well, and then, in the midst of the affection, she is paralyzed with a comparatively rare form of palsy, with paralysis of one side of the face and of the other side of the body. This was preceded by muscular twitchings; the case seemed to be hopeless; but she got over the palsy in ten or twelve days. Another point was the persistence of anæmia, with all that that implies, including anæmia of the brain. The aphasia, also, was very marked. This was all the more striking, because she was a woman of decided mental force and culture and ready expression. The extreme aphasia which was present for a time was probably due to low nutrition of a portion of the brain from anæmia. Another point, and one which has been well brought out by Dr. Graham, is in reference to the therapeutics. Until quite late in the case the symptoms were aggravated, rather than improved, by the use of iron. Improvement always followed the use of muriatic acid, and it is to this and the steady nutrition that her recovery is to be attributed. Late in the case a form of iron, which I have found to be well borne, the phosphate of iron with citrate of ammonia, was well tolerated and well digested; but this may have been due to the fact that the patient had so far convalesced that she could digest iron, whereas previously she could not do so.

DR. HENRY LEFFMANN said that poisoning from carbonic oxide is essentially different from that by most other gases in the fact that a compound is formed by the carbonic oxide and the hæmoglobin which is very difficult to break up. The compound formed by carbonic acid and hæmoglobin can be easily broken up by increasing the tension of the free oxygen present in the blood, but the carbonic oxide compound cannot be. The anæmia was due to the modified condition of the hæmoglobin, and not to the absence of iron, and, therefore, did not yield to the ordinary remedies. An examination of the blood by the microspectroscope and a counting of the blood-cells would, doubtless, have yielded important results.

CORRESPONDENCE.

THE INTERNATIONAL SANITARY CONFERENCE AT ROME.

ROME, May 7, 1885.

THE subcommission composed of the technical delegates to the International Sanitary Conference has completed its labors, and will submit a detailed report

to the *conférence plenière* within two or three days—as soon as it can be printed. In the meantime the members are supposed to be in need of a little relaxation, and are offered by the government an excursion to Naples, which will include a sail about the harbor on an Italian man-of-war, and a visit to Pompeii. The delegates have been very handsomely treated by the Italian government, and the dinner given to the members of the Conference at the royal palace, by King Humbert, will be remembered with special pleasure. This is not the place to describe a State dinner, and it will suffice to say that it was regal in every respect; that His Majesty was extremely civil; that each delegate was presented to him individually; and that he took pains to converse for some minutes with each as he was presented, and again after the dinner.

It as supposed that the business of the Conference will be completed within two or three days after the return from Naples. But no one anticipates that an International Sanitary Convention treaty will be effected at the present ttme. This was the object of the Italian government in inviting each country to send a diplomatic as well as a technical delegate. But it is generally understood that these delegates are for the most part without authority from their respective governments to subscribe to a convention, and that whatever is agreed upon must be *ad referendum*.

The subject of cholera occupied the entire attention of the technical subcommission up to the last session, and it is probable that an adjournment would have been made without reference to any other disease, but for the action of the American delegate, who at the last moment introduced the following proposition:

"The measures recommended to be employed against cholera are, in general, applicable to yellow fever, and to other diseases which prevail epidemically under the influence of bad sanitary conditions, and which are transmissible by the intermediation of man. The most efficacious means to prevent the propagation of the diseases of this class are the sanitation of cities, and of vessels leaving infected ports; the isolation of the sick, and the disinfection of their effects, and of infected or suspected places."

This was passed by a vote of 17 in the affirmative, with 3 abstentions. The abstentions meant that the means named were secondary, as compared with quarantine, and it is probable that if the quarantine party in the Conference had had a little more time to consider the fact, that the measure which they insist upon as the most important was not named in this resolution, they would not have assented to it so readily.

The delegates have been practically divided upon the quarantine question into three groups, and the discussions have for the most part had reference to this question. The English delegates insist upon it that quarantine is useless. Sir Joseph Fayrer, Sir William Hunter and Dr. Lewis, have all spent much time in India, and assume that their superior opportunities for observing cholera have given them very *advanced* notions with reference to this disease. From their point of view, all of the other delegates are laboring under a serious error in assuming that cholera is transmissible by human intercourse, or may be carried across the ocean in ships. They insist that all of their Indian experience negatives this supposition, and assert that when cholera appears in our country, for example, soon after the arrival of a ship having cases on board, it is simply because the "*cholera wave*" has reached our shores, and the cases on the ships are due to the fact that these ships encountered this "cholera wave" while at sea. Cholera travels entirely independently of ships or persons; it is in no sense infectious; the dejections of the sick are harmless; disinfection is a farce. Consequently, quarantines of all kinds are useless, and to detain English ships coming through the Red Sea and Suez Canal for the protection of Europe is a superfluous and unscientific proceeding.

It is doubtful whether these gentlemen represent the state of medical opinion in England at the present day, but they represent a respectable body of English medical officers in India, whose views have been very well stated by Surgeon-General Cunningham, in a little book recently published. These gentlemen are very sincere, and are practically in the same position with reference to cholera as were many reputable medical men in our southern seaboard cities, as regards yellow fever, some twenty-five years ago. There are still a few who adhere to the opinion that this disease travels independently of human intercourse, and is endemic in our Southern States. Those who study a disease in the territory where it prevails endemically, are too apt to assume that their familiarity with it gives them special advantages over those who only encounter it occasionally in epidemic form at places remote from its normal habitat. The conditions are greatly complicated in the area of endemic prevalence, and local prejudices often have a certain influence in giving a bias to the judgment even of the fairest minded men.

Our knowledge of the etiology of these diseases has been gained rather from the independent labors of unprejudiced observers who have studied local epidemics at a distance from the endemic centres and who have carefully recorded the facts relating to them; and from bringing together these histories made at different times and in different parts of the world. Certainly the facts, as observed in the United States, do not at all sustain the view of our English friends, and there are probably very few well-informed persons in the United States who believe that cholera comes to us across the broad Atlantic independently of ships and human intercourse.

With the exception of the English delegation it is safe to say that the members of the Conference are unanimous as to the transmissibility of cholera, and by far the largest majority look upon the dejections of the sick as the medium through which the infectious agent is propagated. All are agreed that theoretically quarantine should be an important prophylactic measure; but there is great difference of opinion as to the practical benefit to be derived from quarantine restrictions.

The majority of the delegates are convinced that the arbitrary quarantine of the past is worse than useless, and there is a general desire to substitute for a time quarantine a system of medical inspection, with isolation of the sick, disinfection of infected articles and localities, etc. The French delegation desire in addition to this to detain healthy passengers from an infected port for several days for observation—practically quarantine—but to keep them in separate groups and well removed from the sick, and to release each group at the end of

five days observation if no case has occurred in the mean time.

This modified system of quarantine has received some support, but has been opposed by some of the delegates on the ground that it is unnecessary, and by others on the ground that it is insufficient. The countries which demand a time quarantine of ten, or at least of seven, days are Turkey, Roumania, Spain, Brazil, and Mexico, while the other countries are in part in favor of the system proposed by the French delegates, and in part opposed to any restrictions as regards ships and passengers not sick, other than those required by a rigid medical inspection and the thorough disinfection of soiled clothing, etc. No doubt, the quarantine question will come up again in the general conference, and the special measures which have been recommended for the Red Sea will be stoutly contested by the English delegation.

Two propositions relating to international notification of cases of infectious diseases were passed at the last session of the Technical Subcommission. These propositions are as follows:

1. The Technical Committee expresses the wish that the International Conference affirm the necessity of publishing a bulletin of international statistics for each important city, a bulletin on a uniform plan, and publishing each week the total deaths and the number of deaths caused by each infectious disease, and particularly by cholera and by yellow fever.

2. As concerns cholera and yellow fever, notification of the first cases which appear in different localities, and particularly in maritime ports, should be immediately sent by telegraph to the various governments.

The application to yellow fever was introduced by the delegate from the United States as an amendment, the proposition as first reported having taken no account of this pest of the West Indies, which from an American point of view is quite as worthy of consideration as is the Asiatic pestilence which has almost exclusively occupied the attention of the International Sanitary Conference of Rome.

NEW INVENTIONS.

A DIOPTRIC SCALE OF FOCAL LENGTHS.

BY EDWARD JACKSON, M.D.,
OF PHILADELPHIA.

IN measuring the power of accommodation, when the distance from the eye to its near point has been determined in centimetres or inches, quite a problem in arithmetic must be solved before one can express in dioptrics the amount of accommodative power.

Again, if the distance from a myopic eye to its far point be measured on any ordinary scale, the same problem is to be met before the number of dioptrics of myopia can be known.

This is the chief disadvantage of the metric system for numbering lenses and recording states of refraction. The number of dioptrics expressing the degree of refractive power stands in no such simple relation to the divisions on the common metre measure, as does the expression of the refractive power in inches to the divisions on the yard-stick. Thus, in inches, the expression, one-sixth, is instantly deducible from the six inches marked on the yard-stick. But the 6 D. lens has no corresponding mark on the ordinary metre measure indicating its focal distance, one-sixth of a metre.

This defect of the metric system can be remedied by using a scale divided, not into equal parts, as centimetres or inches, but so as to indicate the focal lengths of the different lenses of the dioptric system. Thus, starting from zero, a mark at one-fiftieth of a metre indicates the focal distance of the 50 D. lens at one-thirtieth of a metre; that of the 30 D. lens at four-fifths of a metre; the five-fourth or 1.25 D. lens, and so throughout.

This scale does away with the necessity for calculating each time the number of dioptrics that a given focal distance represents; and these calculations, though singly brief and easy, have in practice to be made so frequently as to demand a considerable aggregate of labor. I have used such a scale with satisfaction for some years; and recently, at my suggestion, J. W. Queen & Co., of this city, have placed it upon the edge of the metre-inch measures they furnish for the measurement of accommodation, etc. Such a scale is very convenient in the measurement of refraction by the shadow-test. (See *American Journal of Medical Sciences*, April 1885.) It may also be used to determine, in metre-angles, the amount of convergent strabismus.

215 SOUTH SEVENTEENTH STREET.

NEWS ITEMS.

CHICAGO.

(*From our Special Correspondent.*)

TRANSACTIONS OF THE CHICAGO MEDICAL SOCIETY.—As very general dissatisfaction has been expressed with the manner in which the transactions of the Society have been reported during the past two years, a stenographer and committee on publication were elected. Dr. John A. Robison was elected stenographer; Dr. Edmund J. Dorring and Dr. Robert Randolph were elected members of the committee on publication. Only such reports of the Society's proceedings as bear the signatures of these gentlemen are official.

It was determined that in future reporters for the secular press should be excluded from the Society's deliberations.

THE BRITISH MEDICAL ASSOCIATION will hold its Fifty-third Annual Meeting at Cardiff, on July 28th, 29th, 30th, and 31st, under the presidency of Dr. W. T. Edwards, of Cardiff. The Address in Therapeutics will be delivered by Dr. W. Roberts, of Manchester; the Address in Surgery, by Mr. John Marshall, of London; and the Address in Public Medicine, by Mr. Thomas Jones Dyke, o Merthyr Tydvil.

CHOLERA IN SPAIN.—The French Government has decided to send a commission, headed by M. Brouardel, to Spain to study the origin and progress of the cholera epidemic.

THE BRITISH GYNECOLOGICAL SOCIETY has appointed a committee to collect evidence on the subject of menstruation in its physiological and pathological relations, and has voted £50 toward the furtherance of this object.

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